



Aalborg Universitet

AALBORG UNIVERSITY  
DENMARK

## We love bricks

Andersson, Lasse; Foged, Isak Worre; Jensen, Mads Brath; Thiis, Lars

*Publication date:*  
2014

*Document Version*  
Early version, also known as pre-print

[Link to publication from Aalborg University](#)

*Citation for published version (APA):*  
Andersson, L. (Producer), Foged, I. W. (Producer), Jensen, M. B. (Producer), & Thiis, L. (Producer). (2014). We love bricks. 2D/3D (psysical products)  
[http://www.utzoncenter.dk/dk/besoeg/afholdte\\_udstillinger/we\\_love\\_bricks\\_vi\\_elsker\\_tegl.htm](http://www.utzoncenter.dk/dk/besoeg/afholdte_udstillinger/we_love_bricks_vi_elsker_tegl.htm)

### General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal -

### Take down policy

If you believe that this document breaches copyright please contact us at [vbn@aub.aau.dk](mailto:vbn@aub.aau.dk) providing details, and we will remove access to the work immediately and investigate your claim.

# UTZON(X) EXHIBITION 2014

curators Lasse Andersson and Isak Worre Foged

*WE LOVE BRICKS*  
*exhibition text*

---

UTZON (x) Summer School 2014

*August 22nd - November 16st 2014 / Utzon Center*

---

## WE LOVE BRICKS exhibition text

Lasse Andersson, Associate Professor, Ph.D, architect maa  
Department of Architecture and Media Technology, Aalborg University

Publisher: Utzon Center 2014

Bricks have been a well-known material for the last 5000 years, they have influenced architecture in Denmark for soon 1000 years, and during the last couple of generations, children have constructed the world in 'bricks', when playing with the LEGO brick. Today the play as well as the work with architecture have become digital, as well. This applies to children's play with Minecraft or LEGO's advanced worlds all the way to the analyses and design studios of the professional architect and engineer. Welcome to WE LOVE BRICKS!

The exhibition displays buildings in bricks and the architectonic and technical building considerations preceding those. However, the exhibitions also intends to challenge the architect, the engineer, the bricklayer and the building industry by asking for the 'historical new', when the use of bricks is considered. That is how we link the existing building and architectural tradition with new computer aided design and advanced manufacturing techniques. Today, ninety-five percent of the architecture, which is created, is subjected to conventional building techniques, and this will partly continue for many years. Among other things, this is because the research and the projects, which develop new techniques and methods, most often are oriented towards the exploration of the esthetic potentials or remain computer simulated science-fiction visions. Therefore, the new experiments are partly separated from the building industry, which in actual fact decides what is to be built, but which is also desperately demanding innovation. Central to the exhibition is thus the 'old Nordic' material clay, with its texture, its structural quality and its 'placeness' and the use of computer-aided design and advanced manufacturing techniques, which create a flexible link between sketch, prototype and the finished project.

For the exhibition, Utzon(x) has invited the drawing offices CUBO and E+N Arkitektur from Denmark as well as Gramazio & Kohler from Switzerland. The three drawing offices have a diverse portfolio, but in WE LOVE BRICKS, they provide an insight into their buildings with bricks and into the different ways in which tradition, new thinking and technology influence the architecture they create.

With Building S for Handelshøjskolen and the future building for Biotechnology at Aarhus University, CUBO shows how they link tradition and new thinking,

when they embrace one of the most tradition-bound brick buildings in Denmark. With an understanding of the possibilities of the material as well as a sensibility to the tight building typology and the potential of brick, building S and Biotechnology are innovative examples of how it is possible, within confined parameters, to create a completely new architectonic and spatial experience in a brick building.

Villa Octagon from E+N Arkitektur shows how the historical quality of the place in an urban context can be complemented and challenged, via renewed work with bricks in facades and volume. In Villa HideAway, brick is used to create an open and transparent home, which is also influenced by the texture and structure of brick. By virtue of rhythms and shifts in walls as well as facades, this provides possibilities for variations. E+N's play with brick happens in interaction with Randers Tegl with the development of the Flexstone format, which allows a new variation in the work with brick facades, which are usually quite costly, in a Danish context.

From the development oriented Swiss architectural office Gramazio Kohler, the façade project for Gatenbein Vineyard in Switzerland is exhibited. Here, the facades are created via computer-aided design and algorithms, which are sent directly to robots, which then with millimeter precision construct the façade elements. The building shows how the advanced approach combined with the qualities of the brick creates visionary architecture. Among other things, Gramazio & Kohler's work has given rise to the company ROB technologies, which today develops software for the work with bricks, robots and architecture. Here lies the potential as well as the challenge between building tradition and innovative technologies.

Utzon(x) unfolds design experiments directly in the exhibition. These show how you can develop a pavilion in brick at Aalborg Harbor Front, by using new technologies. Utzon(x) includes knowledge from the three drawing offices and co-operates with the building industry about materials. A committed collaboration with Construction College Aalborg is thus a central key point, and the pavilion is developed through collaboration between Utzon(x) students and researchers and bricklayer apprentices from Construction College and master builders. In this way, a close link is formed between computer simulations, design studios and the actual building in bricks in a 1:1 scale.

From August to November, the exhibition will be continually developed with design experiments, symposiums and with the construction of a pavilion in



brick between the Utzon Center and Musikkens Hus.

### **UTZON(X) Design Experiments 1**

Utzon(x) shows a number of design experiments, which have been developed by students at the Utzon(x) Summer school 2014, during the first weeks of the exhibition. The design experiments form a basis for the construction of a pavilion in bricks. The pavilion, which is to be placed between the Utzon Center and Musikkens Hus, is to be built during September 2014. The design experiments partly include small 3D-printed scale models, partly built sections in 1:1 scale. The 3D-models explore the potential of the brick related to a number of requirements to the architectonic and spatial qualities, but they also focus on statics and influence of forces as well as environmental factors like thermal comfort and wind conditions. The printed models have been generated from advanced computer designs and technical analyses, which again are linked to underlying algorithms. This means that if a factor like for example the impact of the sun and thermal comfort is altered, then the entire system is updated and thereby also the shape of the pavilion. This provides possibilities for working in a design process, which in principle can assimilate changes very late in the documentation phase. The 3D-printed models and the computer drawings form the basis for developing built models. In practical terms, these investigate how dome vaults can be adapted and updated architectonically for the pavilion, which is to be built by the bricklayer apprentices from Tech College Aalborg. During the process, knowledge from the producers of material is included, and thus the circle from theory to praxis is completed.

### **UTZON(X) DESIGN EXPERIMENTS 2**

A primary part of the Danish building culture and proud architectural heritage is its masonry buildings. Masonry as an architectural material, method and expression have been applied to a wide range of building typologies. It is versatile, weather resistant, and easily comprehensible due to its simple geometry, while advanced in its material behaviour and potential assemblies. Commonly, a brick wall is perceived as an assembly of arranged bricks. However, as the binder between the bricks makes for a large portion of the visible surface and material use, its ability to commonly enhance the articulation pattern and essentially is the material that holds the brick assembly together, it suggests a potential outset for investigation on equal terms with the brick itself. We could ask, how is mortar understood in a brick assembly and how could it take part in future masonry work? How is this aspect related to new forms of manufacturing technologies? Furthermore, an assembly constructs not only a dividing surface, but also a geo-

metrical pattern perceived by the eye. It reflects, absorbs, and emits heat understood by our bodies and our skin reads the diverse textures of the surfaces by direct contact. In short, masonry assemblies have the ability to enhance human sensing and therefore increase the understanding of both architecture and the environment. With the intention of exploring above notions, we can ask, how can emerging architectural technologies increase our abilities to create sensing architectures? The Utzon(x) summer school explores the questions through material-based-design experimentations mediating the potential of brick architecture and identify a new tectonics beyond new technology. In this process, the computer is used as an active decision maker in form generation and form manufacturing in parallel to the human designer decision taking. This form of collaborative decision-taking ask for new ways in which the computational processes can sense, suggest and inform the human designer for better design observations and holistic design decision-taking.

### **YOUR DESIGN EXPERIMENTS Become a part of –WE LOVE BRICKS!**

Design experiments are not restricted to the professional architect, designer or engineer. An important part of creating and designing actually happens via experiments, which are closely linked to play. A game, which is parallel to studies and analyses, which happens when children play with LEGO, for instance. Most people have built, re-built and added extensions, compared and made changes to the LEGO buildings in the children's room. Today, this kind of play also takes place in game environments, like the Minecraft universe, where children construct, share designs, build together and make extension, on line. They compare and share experiences, individually and in groups. In this way, they learn via creating and designing in a digital environment – but completely in line with the physical LEGO experiments in the children's room.

When the game becomes serious, and you work as a professional architect, designer or engineer, the play is based on and supplemented by analyses and theory. Here, the central point is therefore the underlying method, and that you have a critical attitude to your own design experiments and evaluate these in relation to those of others.

From Utzon(x) we therefore invite everybody to join the play and contribute to the exhibition with your own 'brick' design on the small brick shelves at the Utzon(x) wall. The many bricks will be filled with your design experiments and, together with the three drawing offices and the contributions from the Utzon(x) students to the exhibition, they will create new knowledge and inspiration.

This is Learning by Designing!





**Gramazio & Kohler / ETH Zürich**

Rob technologies

*Gatenbein Vineyard Facade  
Structural Oscillations*

---

*Photo Ralf Feiner*

---



The Swiss architectural office Gramazio & Kohlers projects combine the physics of built architecture with digital logics. Therefore, they do not design architecture solely by drawing, but conceive spatial relationships and contextual behavior through programming. In doing so, they use the potentials of the computer and of digital fabrication complementary to traditional design, construction and building methods. The sensual quality of this design culture manifests itself in the novel expression of a Digital Materiality.

Besides running their architectural office Fabio Gramazio and Matthias Kohler also holds full professorship at ETH in Zürich. Their research intertwines with their architectural praxis. In their research at ETH they examine the changes in architectural production requirements that result from introducing digital manufacturing techniques. Their special interest lies in combining data and material and the resulting implications this has on the architectural design. The possibility of directly fabricating building components described on the computer expands not only the spectrum of possibilities for construction, but, by the direct implementation of material and production logic into the design process, it establishes a unique architectural expression and a new aesthetic.

The exhibited project by Gramazio & Kohler is the facade for a new service building at the Gantenbein Vineyard. It is one of Gramazio & Kohlers earlier works from 2006. It shows us how the combination of a classic material – bricks - and new technologies with robots contribute to the development of brick buildings that we seldom today. Gramazio & Kohler hereby contributes to both methodological discussions as well as the aesthetic and spatial qualities when building with Bricks.

### **ROB Technologies**

The firm was established in 2010 as an official Spin-off of ETH Zurich and today its headed by Dr. Ralph Bärtschi and Dipl. Ing. Tobias Bonwetsch. Both have been involved in research and development of robotic based design and fabrication processes at the ETH right from the beginning including the Gantenbein project.

The company builds upon the research work developed at the chair of Gramazio & Kohler for Architecture and Digital Fabrication at the ETHZ Zurich.

Since 2006 the founders of ROB Technologies are developing and implementing robotic based fabrication processes for brick constructions. Apart from simple automating solutions a focus of the development is to investigate the design potential opening up when applying robotic systems. Contrary, to a mason the robot can position every brick differently without any optical reference or need for measurement. This simple fact introduces completely novel design possibilities

for a traditional and several century old building module.

An example of R-O-B Technologies recent work is the software ROB Creator that enables customers to easily design their own non-standard brick wall elements.

The software transfers the data of a digitalized image into physical information to position each individual brick. At the same time this design data can be further processed to control a robotic fabrication system. ROB Creator links an intuitive design tool directly with the fabrication parameters of the robot and thereby guarantees that each design can actually be realised.

The robotic brick process was applied in constructing the facade of the Gantenbein vineyard located in Flaesch, as well as in several research projects at the ETH Zurich

### **Gantenbein Vineyard Facade, Fläsch, Switzerland, 2006 Non-Standardised Brick Facade**

The project was realized as an extension of a small but remarkably successful vineyard. The wine producers wanted a new service building, consisting of a large fermentation room for processing grapes, a cellar dug into the ground for storing the wine barrels, and a roof terrace for wine tastings and receptions. Bearth & Deplazes Architects designed the project, and it was already under construction when they invited us to design its facade.

The initial design proposed a simple concrete skeleton filled with bricks: The masonry acts as a temperature buffer, as well filtering the sunlight for the fermentation room behind it. The bricks are offset so that daylight penetrates the hall through the gaps between the bricks. Direct sunlight, which would have a detrimental effect on the fermentation, is however excluded. Polycarbonate panels are mounted inside to protect against wind. On the upper floor, the bricks form the balustrade of the roof terrace.

The robotic production method that we developed at the ETH enabled us to lay each one of the 20,000 bricks precisely according to programmed parameters at the desired angle and at the exact prescribed intervals. This allowed us to design and construct each wall to possess the desired light and air permeability, while creating a pattern that covers the entire building facades. According to the angle at which they are set, the individual bricks each reflect light differently and thus take on different degrees of lightness. Similarly to pixels on a computer screen they add up to a distinctive image and thus communicate the identity of the vineyard. In contrast to a two-dimensional screen, however, there is a dramatic play between plasticity, depth and color, dependent on the viewer's position and

the angle of the sun.

The masonry of the vineyard's facade looks like an enormous basket filled with grapes. At closer view – in contrast to its pictorial effect at a distance – the sensual, textile softness of the walls dissolves into the materiality of the stonework. The observer is surprised that the soft, round forms are actually composed of individual, hard bricks. The facade appears as a solidified dynamic form, in whose three-dimensional depth the viewer's eye is invited to wander. In the interior, the daylight that penetrates creates a mild, yet luminous atmosphere. Looking towards the light, the design becomes manifest in its modulation through the open gaps. It is superimposed on the image of the landscape that glimmers through at different levels of definition according to the perceived contrast.

### **Falling Spheres**

To create the facade, we designed a generation process. We interpreted the concrete frame construction by Bearth & Deplazes as a basket and filled it with abstract, oversized grapes of varying diameters. We digitally simulated gravity to make the grapes fall into this virtual basket, until they were closely packed. Then we viewed the result from all four sides and transferred the digital image data to the rotation of the individual bricks. On the built facades, the visitor discerns gigantic, synthetic grapes, which were virtually inside the building as we developed our design. However, the architectural implications of this brick facade are more elaborate and diverse than those of a two-dimensional image. To the human eye, able to detect even the finest difference in color and lightness, the subtle deflection of the bricks create an appearance and plasticity that is constantly changing along with the movement of the observer and of the sun over the course of the day. The joints between the bricks were left open to create transparency and allow daylight to trickle into the building. In order to make the pattern discernible from the interior we laid the bricks as close together as possible so that the gap at full deflection was nearly closed. This produced a maximum contrast between the open and the closed joints and allowed the light to model the interior walls poetically.

### **Bricklaying**

The wall elements were manufactured as a pilot project in our research facilities at the ETH Zurich, transported by lorry to the construction site, and installed using a crane. Because construction was already quite advanced, we had only three months before assembly on site. This made manufacturing the 72 facade elements a challenge both technologically and in terms of deadlines. As the robot could be driven directly by the design data, without our having to produce

additional implementation drawings, we were able to work on the design of the facade up to the very last minute before starting production. To accelerate the manufacturing process for the 400 square meter facades, we had to develop an automated process for applying the two-component bonding agent. Because each brick has a different rotation, every single brick has a different and unique overlap with the brick below it, and the one below that. Together with the brick manufacturer's engineer, we established a method in which four parallel bonding agent paths are applied, for each brick individually, at pre-defined intervals to the central axis of the wall element. Load tests performed on the first elements manufactured revealed that the bonding agent was so structurally effective that the reinforcements normally required for conventional prefabricated walls were unnecessary.



# CUBO Architects

*Department of Biomedicine and Building S, Aarhus University  
The Skejby Buildings  
“Vandhalla” Egmont Rehabilitation Centre, Hou*

---

*Photo Martin Schubert*

---



The brick is universal - in spite of our tendency to designate the material as specifically Danish. But it feels Danish, due to the course of history where every Danish parish had its own brick works. So the brick has become a part of our collective identity and cultural heritage because it has been adaptable and flexible in format and character to the changing of time but also to the human scale. Cubo has always been interested in this versatility and at the Utzon Centre we show new buildings that continues this investigation.

Our buildings on the University Campus in Aarhus are obviously heavily related to the historic context of the original project of Fisker, Stegmann and CF Møller from 1931. In contrast, the Skejby buildings, outside of Aarhus, define their own 'tradition' in the interpretation of the Danish 'long house' – an old building typology. The Vandhalla building in Hou, south of Aarhus, is a more expressive statement that responds to specific functional and contextual constraints.

The architectural office of Cubo was formed in 1992 by Peter Dalsgaard, Bo Laurtrup, Lars Thiis and Ib Valdemar. In 2014 Søren Marxen, Sune Nielsen, Per Ravn and Rune Riis joined as partners. Cubo was in 2011 awarded the most prestigious architectural prize of Denmark, the Nykredit architectural prize.

The Campus at Aarhus University is renowned for the superb architectural heritage. Erected in the 1930s, the architecture of the University is modern and anti-monumental, as an organic interpretation of the open campus in the center of a city. It provides distinctive and solid evidence of how a major structure in an urban context can develop with beauty and soul over a period of more than 80 years. The University campus is now listed and protected by a municipal regulation plan. Cubo has maintained and continued this tradition in the recent additions to the campus and the designs of the new faculties in this listed context was and still is challenging and commanding.

### **Department of Biomedicine, Aarhus University**

The main concept of the master plan for the Faculty of Health, won by Cubo in a competition in 2012, is a continuation of the familiar theme of the University – a theme that has always had its variations. One could argue that it is precisely these variations that keeps the University Campus alive – in architectural terms. The new large building volumes that houses the department of Biomedicine creates a new grandeur and gravity in the University Park's southern area – an arrangement that inscribes itself naturally in the building hierarchy at the Aarhus University.

The striking transparent gable invitingly leads towards the main entrance located in the gables large opening. The gables, where more public and social functions are placed, reflect their use in the exterior and gives distinction to the new

building from the old ones. Especially in the darker hours this will become evident as the brick collages of the gables filter the activities and light of the interior. The transparent gables links to the School of Business and Social Sciences new Building S, also designed by Cubo, and a clue is given to the fact the School is now an integral part of the University.

### **Building S, School of Business and Social Sciences, Aarhus University**

The School of Business and Social Sciences is a broad business school and one of the four main academic faculties at Aarhus University. In the new main entrance building the architectural bonds to the given surroundings are evident, but they appear with modest though clearly distinctive features. As a main motif of the University the gables represent an important key to the understanding of the architectural language.

The Business and Social Sciences Campus is situated just outside of the original University but the proximity lead CF Møller to design the buildings of 1963 in the architectural grammar of the University. The main variation was the chosen brick. CF Møller had chosen a color varied brick texture to the elevations and to ensure a uniform distribution and the right variation of colors in all the façades of the new building Cubo tried out various solutions. Six different types of bricks from three different brickyards were chosen and supplied ready-mixed. The colors does resemble the expression of the original buildings, which have coal burnt bricks as opposed to the gas burnt bricks used in the newer buildings.

### **The Skejby Buildings**

The story of the two office buildings in Skejby north of Aarhus is rather interesting because the buildings did not comply with the municipal plan, which demanded flat roofs. Our two new houses broke that rule – but they were built, nevertheless. They both had a pitched roof and introduced a 'traditional' roof-scape into surroundings that were dominated by very uniform boxes of office buildings – a typical suburban picture.

Cubo took part in a competition for an office domicile for a producer of detached houses and we wanted to relate the activities of building one family houses into the language of the domicile. The Danish 'long house' was an appropriate starting point, so it would be okay to symbolize HOUSE, to even resemble kids drawings – and there is a sort of eternal notion to the Danish 'long house', which felt very comfortable. So in contrast to the surrounding glass elevations, the office building of Frydkjær, was formed from an old traditional framework into something new. The house is a brick house where the potential of the brick is being examined.

When the neighbor, Aagaard Fertility, approached us in their need for a new building, we were keen to create a dialogue between the two buildings. A dialogue with a theme of contrasts but still with obvious links. Same rectangular 'long house', same pitched roof and a brick base that links the building to the site. But Aagaard is moved back from the street, Frydkjær is forwarded. It's one floor against two. It's white against black (or rather, dark brown against light grey!). The dialogue is expressed in the detailing.

### **“Vandhalla” Egmont Rehabilitation Centre, Hou**

Vandhalla, the new rehabilitation centre provides a statement, a landmark that exposes the functional needs of the school architecturally and thus provides a renewed identity to the school's old buildings. The complex design centers around the seminal dressing room which forms a functional hub surrounded by the various leisure functions. The main feature is a water slide accessible for wheelchair users. The top is reached either by stairs or elevator, and before sliding the 90 meters you enjoy the view of the swimming pool and the vista towards the island of Endelave.

The Brick of Vandhalla is very important. It adds a visible, strong and powerful statement about both massing and adaptability, because the dark brick with recessed grout is adaptable to the varied and seemingly complex roofscape, but it also adds a solid sturdiness that is challenged by the large cuts into the massing allowing glimpses into the pool activity. The brick is in key with the surrounding wood and the towering top gives the high school a distinct visual identity.





E+N Architecture

*Villa Hideaway  
Villa Octagon*

*Photo E+N Architecture*

Today, E+N Architecture A/S is owned and run by the architects m.a.a. Finn Larsen, Eva Holdgaard Jensen, Kjeld Ghozati and Jesper Back. The drawing office was founded in 1958 by architect couple Inger and Johannes Exner. E+N Architecture has a particular core competence in developing and creating projects in the interface between new and old, and through many years, it has gathered experience in renovation of – and extensions to - listed buildings and buildings worthy of preservation.

During its 50 years of work, the drawing office has been in charge of the renovation of Koldinghus during the leadership of Inger and Johannes Exner as well as of the revitalization of the UNESCO World Heritage ruin St. Nicolai in Visby, among other things. Through these and many other projects, the drawing office has developed strategies for and attitudes to working with cultural heritage and historically inspired new buildings.

Throughout the years, the office has headed the construction of a large number of new churches and parish community centers. Furthermore, the drawing office has worked with several projects in the interface between new and old. Among others the alterations of the barn and stable complex at Hindsgavl Castle into hotel and conference facilities, new visitors' building at Spøttrup castle, auditorium at Ridehuset for Hærens Officerskole by Frederiksberg Castle and the alterations of the burnt down Stadtsfestzaal in Antwerp ( Belgium) into a shopping arcade.

It is the purpose of the drawing office that the approach to each particular task is individual and takes its point of departure in the wishes and needs of the user. At the drawing office, there is a specific focus on the qualities and texture of the material, as well as determination to maintain the quality from the whole to the detail. Many of the buildings of the drawing office at home and abroad have received prizes and been published in both national and international journals.

### **Villa Hideaway**

The house is nestling in the sloping grounds in Risskov close to Aarhus. Surrounded by villas from different epochs and hardly visible from the public road. A charming hideaway, which creates a well-functioning and modern frame for a dynamic family with three kids.

The house does not seem particularly large, when you arrive by the narrow road. The refined, sand-colored brickwork signals quality, but does not reveal much about what might be hiding behind. There is a conscious sparing use of effects. From the windbreak, you step directly into the unique atmosphere of Villa Hideaway. The plan of the house is an open angle with two wings, and in a few glances, the visitor is able to survey a large part of the interior. Then again, may-

be not. Straight ahead, there is a long view through the primary living room in the house and to the right there is a mosaic of rooms, distributed on three levels. An untraditional ground plan has been created by focusing on 'places' rather than square rooms. The kitchen lies as an island in the main room, and around this 'places' to read, drink coffee, play etc. have been arranged. On the lowest level there is an office.

Close to the green and the blue

Even though the house is situated in the 5th row in relation to the Aarhus Bay, there is a view of the ocean from all the rooms on the top levels. The building opens up towards the Southeast with large areas of glass, and between the lower lying neighbor houses there are fine views to the sea and to Mols. You feel close to the green in the garden and also to the blue in the horizon.

Architect MAA Kjeld Ghozati says: "This house is based on 'musical' shifts with rhythm and poetry. It was the wish of the client that natural materials were used throughout and that the rustic look was accentuated."

Yellow bricks with the reverse side facing outwards have been used both inside and outside. A long in situ cast inner wall carries the roof to the North. The strong spanning rafters are visible and provide visual coherence in the whole house. The Troldekt ceiling is an important part of the natural identity of the house while it also diminishes the noise level markedly in the open spaces. There are oak planks on the floors and all cupboards are built into the brick walls, with doors from the finest oak veneer.

Facts:

One family house in Risskov

Client: family with three children

Architect: Kjeld Ghozati – E+N Architecture

Size: Residence 300 m<sup>2</sup>

Ground 1000 m<sup>2</sup>

Year of construction: 2011-2012

### **Villa Octagon**

Villa Octagon is a small, newly built townhouse, which sculpturally fits in between three historical villas in the 'Øgadekvarter' in Aarhus. In spite of its modest size, this house definitely contributes to giving the entire street new vitality with its charming appearance. At first glance, it may seem a bit angular and mystical, but any skepticism vanishes like dew before the sun on closer acquaintance.

Villa Octagon has its inspiration in the architect Palladio's famous Villa Rotonda from the fifteen hundreds in Vicenza, close to Venice. Villa Rotonda's distinc-



tive feature is a cross-shape with two strong symmetrical axes, which meet in a round, central space.

In contrast to this, the central space in Villa Octagon is an octagon and the axes are diagonal, so that the views from the flats are in the direction of the green garden space of the neighboring houses rather than towards the closest neighboring houses. This ensures a “green” experience while avoiding annoying views directly into each other’s homes.

A significant part of the fundamental idea of the house is the ascent through the house with its three inlaid “pauses”. When walking up the stairs to the first floor, you reach the first “pause” – a first glass eye, from where you can look out to the surrounding area. After the stairs to the second floor, you find yourself in the second glass eye, from where you can see the street below. After the stairs to the third floor, you get to a room with a fantastic panorama view of Aarhus. The exterior roof terrace increases the area by two during the summer months. The interior is characterized by good materials and beautiful spatial effects. The ceilings in the kitchen/family rooms and in the stairwell itself have been partially covered with Troldekt, which fits the atmosphere of the house perfectly. The Troldekt sheets are separated by a wooden strip, which creates a beautiful, decorative effect while breaking the monotony of the surface.

The building has been constructed in the new, flexible brick format FlexStone from Randers Tegl, which stands out by having the same module measurement in all three directions, making it possible to turn and rotate the bricks, while the measurements always fit.

Soon after the construction, Villa Octagon received the Architecture Prize from Aarhus Municipality.

Facts:

Villa Octagon

Thunøgade – Aarhus C

Client: Private

Architect: Kjeld Ghazati – E+N Arkitektur

Bricklaying subcontractor: HUI A/S

Year of construction: 2012-2013